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# PATENT ABSTRACTS OF JAPAN

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## (54) MANUFACTURE OF SILICON THIN FILM

(57) Abstract:

**PURPOSE:** To enable formation of a continuous silicon thin film having a film thickness of 300Å&angst; or less by arranging a substrate inside a vacuum CVD device, by heating an interior of the device to 400 to 550°C, by supplying pure disilane thereto, and by forming silicon by vapor growth at a growth speed of 60Å&angst;/minute or less on the substrate.

CONSTITUTION: A substrate is

arranged inside a vacuum CVD device.

An interior of the device is heated to

400 to 550°C and silicon is formed by

vapor growth at a growth speed of

600Å/minute or less on the

substrate by supplying pure disilane

thereto to form a silicon thin film. As

for the disilane, ones which do not

certain other silane such as monosilane

or trisilane are suitable. The disilane

can be supplied by diluting with gas

such as nitrogen, hydrogen, helium,

and argon. Thereby, disilane is

decomposed inside a vacuum CVD

device at a specified temperature to

form silicon on the substrate uniformly

by vapor growth and continuous

silicon thin film having film thickness

of 300Å or less and without an

island-like interruption can be formed.

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